

# Wisconsin Department of Safety and Professional Services

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## DIVISION OF INDUSTRY SERVICES

### ASME A112.18.1 FAQ

#### **382.40(5)(b) Recirculated Hot Water** tb 042617

**Q.** Is a cold water line allowed to be part of the hot water circulation system specified in 382.40(5)(b)?

**A.** No. The intent for a hot water circulation system is to provide hot water within a reasonable amount of time without having to waste water to receive hot water at an outlet. By incorporating the cold water supply as part of the recirculation system, the cold water becomes tempered and in conflict with 382.10(2)©, 381.01(57), and 382.10(1)(b) (using excessive water). If the hot water system does not exceed 100' and a recirculating system is not required but is installed, the code sections still apply.

#### References

**381.01(57)** "Cold water" means water at a temperature less than 85°F.

**381.01(126)** "Hot water" means water at a temperature of 110° F. or more.

**381.10(256)** "Tempered water" means water ranging in temperature from 85°F. to less than 110°F.

**382.10(1)(b)** Plumbing fixtures, appliances and appurtenances, whether existing or to be installed, shall be supplied with water in sufficient volume and at pressures adequate to enable the fixtures, appliances and appurtenances to function properly and efficiently at all times and without undue noise under normal conditions of use. Plumbing systems shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

**382.10(2)©** Hot or tempered water shall be supplied to all plumbing fixtures that normally require hot or tempered water for proper use and function.

**382.40(3)(b)1.** Tempered water. A. Tempered water or hot water shall be

provided to lavatories, wash fountains and shower heads which are not located in dwelling units or living units.

**382.40(5)(b)** *Temperature maintenance.* If the developed length of hot water distribution piping from the source of the hot water supply to a plumbing fixture or appliance exceeds 100 feet, a circulation system or self-regulating electric heating cable shall be provided to maintain the temperature of the hot water within the distribution piping.

**382.40(5)(b)3.** Water distribution piping conveying circulated water or served by a self-regulating electric heating cable shall be insulated to limit the heat loss at the external surface of the pipe insulation to a maximum of 25 BTUs per hour per square foot for aboveground piping and 35 BTUs per hour per square foot for underground piping. The maximum heat loss shall be determined at a temperature differential, T, equal to the maximum water temperature minus a design ambient temperature no higher than 65°F.

#### **382.41(3) Cross Connection Control for Handheld Showers/Sprays on Faucets** rb 031417

**Q.** Do handheld showers or sprays on faucets that meet ASME A112.18.1 required to have additional backflow protection?

**A.** Yes, unless one or more of the following apply:

1. There is written verification from ASME that the faucet has passed section 5.9 of the ASME standard.
2. There is a visible acceptable cross connection device, assembly, or method present.
3. There exists an ASME A112.18.3 marking (accompanying literature or on faucet);
4. Recognized by an acceptable 3<sup>RD</sup> party listing agency per 381.11, or
5. Has an alternate plumbing approval from DSPS.